DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	MARSH POND	Lake Area (ha):	6.07
Town:	ALTON	Maximum depth (m):	5.5
County:	Belknap	Mean depth (m):	---
River Basin:	Merrimack	Volume (m^3):	---
Latitude:	43°28' N	Relative depth:	---
Longitude:	71°11' W	Shore configuration:	2.17
Elevation (ft):	590	Areal water load (m/yr):	---
Shore length (m):	1900	Flushing rate (yr^{-1}):	---
Watershed area (ha):	4002.1	P retention coeff.:	---
% watershed ponded:	11.4	Lake type:	natural

BIOLOGICAL:	26 January 1987	3 July 1986
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 71%	CERATIUM 98%
#2	PENNATE SPP 12%	
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		850.0
CHLOROPHYLL-A (µg/L)		30.31
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 33%	KERATELLA 37%
#2	KELLICOTTIA 21%	POLYARTHRA 19%
#3	CYCLOPOID COPEPOD 21%	NAUPLIUS LARVAE 16%
ROTIFERS/LITER	28	567
MICROCRUSTACEA/LITER	17	174
ZOOPLANKTON ABUNDANCE (#/L)	52	741
VASCULAR PLANT ABUNDANCE		Abundant
SECCHI DISK TRANSPARENCY (m)		3.4
BOTTOM DISSOLVED OXYGEN (mg/L)	1.8	0.2
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		
#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3): None

CHEMICAL:

Lake: MARSH POND
Town: ALTON

	26 January 1987		3 July 1986		
DEPTH (m)	1.0	3.0	2.0		4.0
pH (units)	6.6	6.2	6.6		6.5
A.N.C. (Alkalinity)	6.9	8.0	6.7		6.9
NITRATE & NITRITE NITROGEN	< 0.05	0.07	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.53	0.70	0.60		1.25
TOTAL PHOSPHORUS	0.033	0.069	0.042		0.112
CONDUCTIVITY (μ mhos/cm)	33.4	36.5	33.2		31.7
APPARENT COLOR (cpu)	12	22	25		35
MAGNESIUM			0.33		
CALCIUM			2.7		
SODIUM			2.3		
POTASSIUM			0.40		
CHLORIDE	2	2	3		3
SULFATE	4	4			
TN : TP	16	11	14		11
CALCITE SATURATION INDEX			3.4		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1986

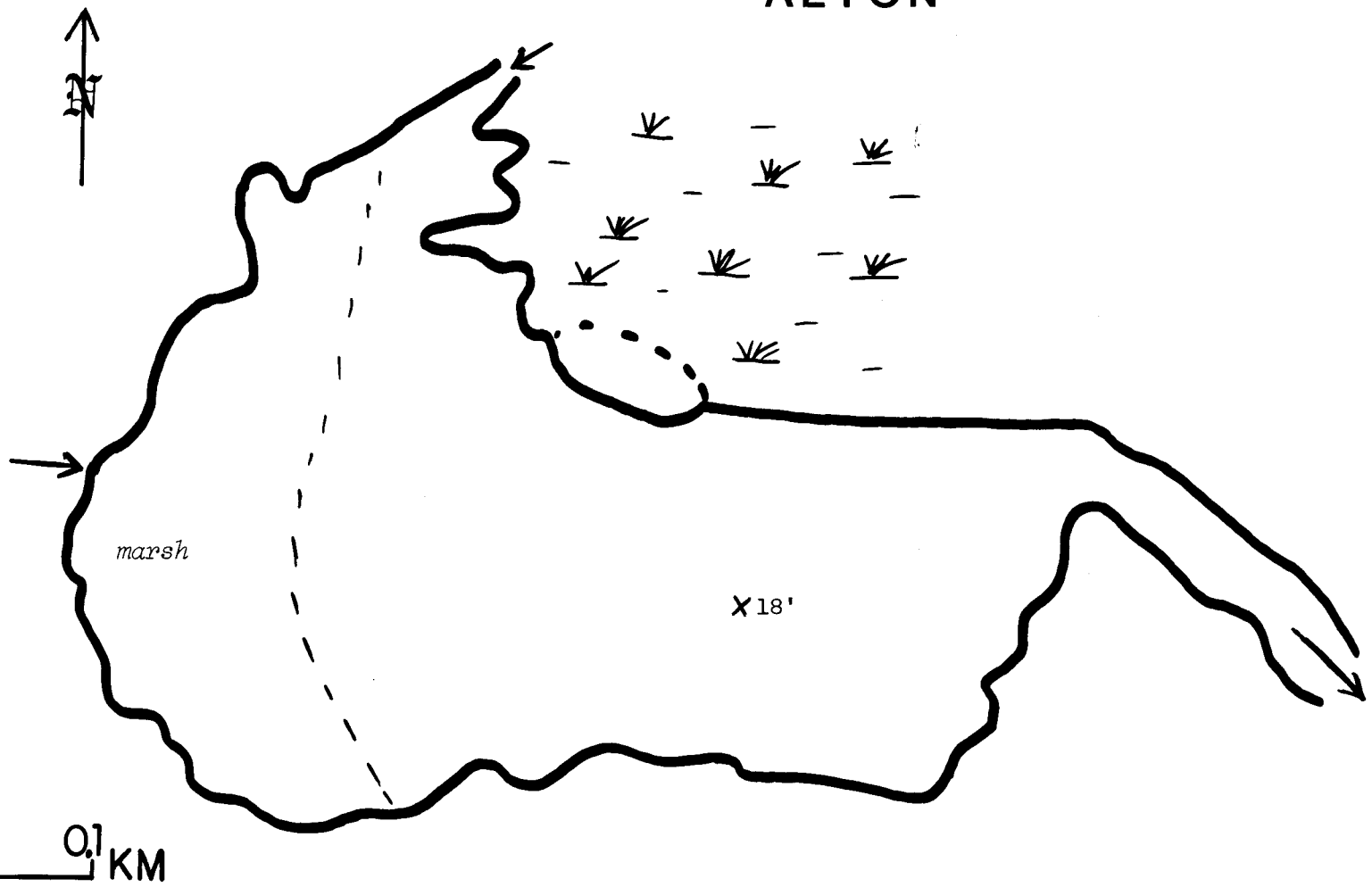
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	3	5	10	Eutro.

COMMENTS:

1. This pond lies downstream of the Powder Mill Hatchery, and thus receives a high phosphorus load.
2. Also called Unnamed Pond No. 1.
3. The pond was surrounded by marsh; it was difficult to determine where the pond ended and the land began.
4. No depth soundings were taken because of the difficulty in determining the boat location with respect to the shoreline.

MARSH POND

ALTON



FIELD DATA SHEET

LAKE: MARSH POND
DATE: 07/03/86

TOWN: ALTON
WEATHER: OVERCAST & COOL

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	18.8	7.1	75 %
	1.0	18.0	7.0	74 %
	2.0	17.2	6.8	69 %
	3.0	16.4	9.1	92 %
	4.0	14.2	0.3	3 %
	5.0	11.6	0.2	2 %

SECCHI DISK (m): 3.4

BOTTOM DEPTH (m): 5.5

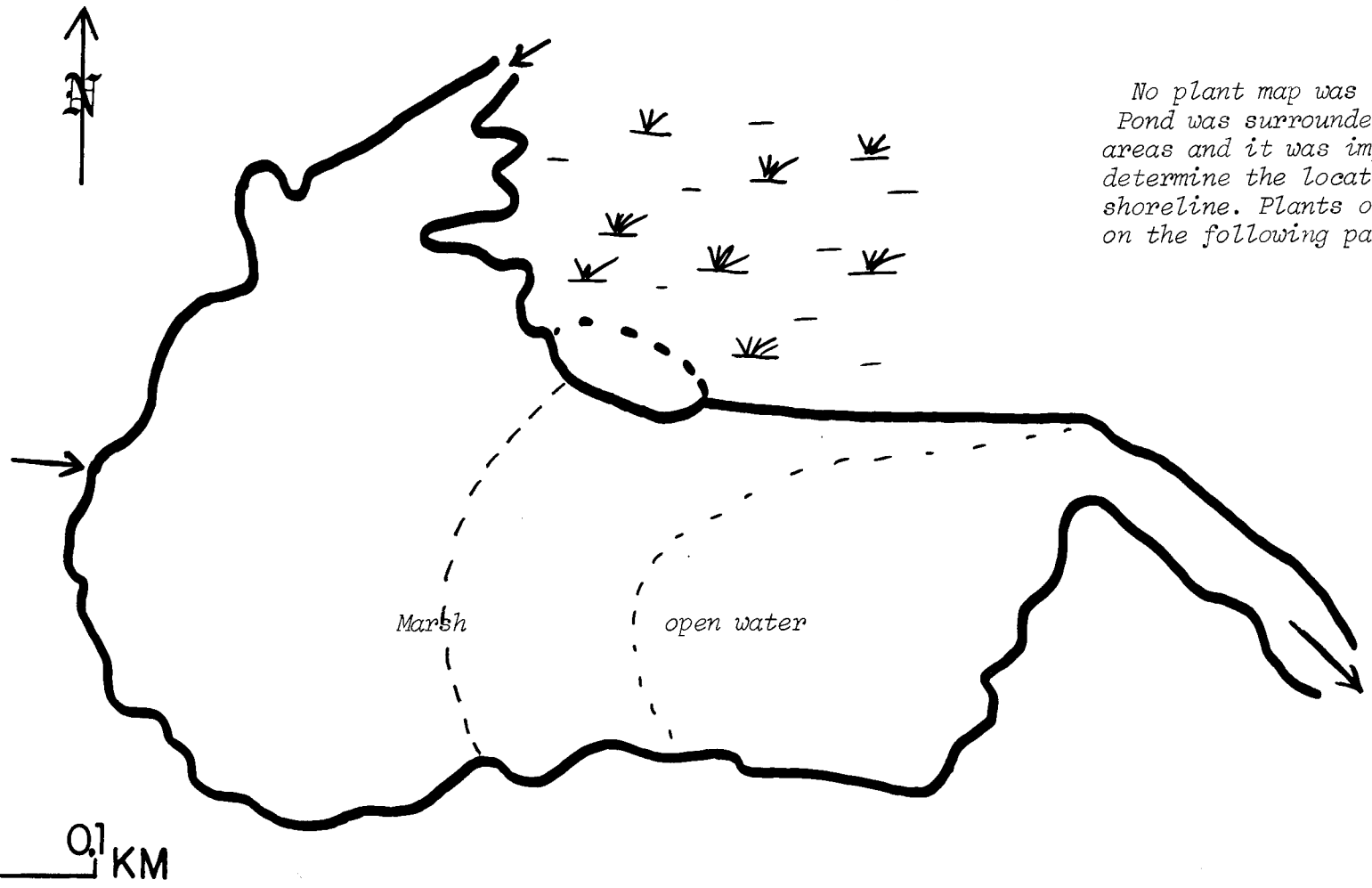
TIME: 1205

COMMENTS:

*Dissolved oxygen values are in mg/L

MARSH POND

ALTON



No plant map was constructed. Pond was surrounded by wetland areas and it was impossible to determine the location of the pond's shoreline. Plants observed are listed on the following page.

AQUATIC PLANT SURVEY

LAKE: MARSH POND TOWN: ALTON DATE: 07/03/86

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
T	Typha	Cattail	Very abundant
W	Potamogeton	Pondweed	Abundant
S	Sparganium	Bur reed	Common
P	Pontederia cordata	Pickerelweed	Abundant
a	Peltandra virginica	Arrow arum	Scattered
D	Decodon verticillatus	Swamp loosestrife	
Y	Nuphar	Yellow water lily	
U	Utricularia	Bladderwort	
f	Chlorophyceae	Filamentous green algae	
b	Scirpus	Bulrush	
R	Andromeda glaucophylla	Bog rosemary	
x		Bottom growth	

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

1. No plant map was constructed. The pond was surrounded by extensive wetland areas, and it was impossible to determine the location of the shoreline. The shape of the pond did not look like the outline drawn from a 1981 aerial photo. The plants observed are listed above.